

21. HAYASHI (column 4, line 46) refers to items 3 as "electronic elements" but does not teach that they are IC die. From the drawings, items 3 appear to include I/O pins extending from narrow sides. Since no IC die known in the art include such I/O pins, one of skill in the art would not be led to believe that items 3 are IC die. They look like packaged surface-mount ICs, not IC die. Moreover, items 3 are not linked to a surface of a base IC die as recited in claim 21,; they are linked to a surface of a printed circuit board 2

The Examiner errs in pointing to items 4 of HAYASHI's FIG. 3 as being "conductive contacts extending between the first surface of the base IC die and conductors on the substrate" as recited in claim 32. Items 4 are not a conductive contact extending between two IC dice; they extend between two printed circuit board.

Claim 22

Claim 22 depends on claim 1 is distinguishable over HAYASHI for similar reasons. Claim 2 is further distinguished over HAYASHI because HAYASHI fails to teach that "solder forms the first conductive signal paths" as recited in claim 2.

The Examiner errs in citing HAYASHI (column 4, line 49) as teaching that solder forms first conductive signal paths which, as recited in claim 21 link a first secondary IC die to a surface of a base IC die. The cited section of HAYASHI teaches that solder links terminals 4 to electrodes 2a on the surface of a printed circuit board 2 (FIG. 1).

Claim 23

Claim 23 depends on claim 21 and is distinguishable over HAYASHI for similar reasons.

Claim 24

Claim 24 depends on claim 21 and is distinguishable over HAYASHI for similar reasons. Claim 24 is further distinguishable over HAYASHI because HAYASHI fails to teach that "the substrate is a semiconductor substrate" as recited in claim 24.

The Examiner errs in pointing to HAYASHI as teaching that item 5 is a semiconductor substrate. HAYASHI teaches at column 5, lines 29

and 41 that item 5 is a "printed circuit board" and makes no suggestion that item 5 is or could be a semiconductor substrate.

Claim 29

Claim 29 depends on claim 21 and is distinguishable over HAYASHI for similar reasons. Claim 29 is further distinguishable over HAYASHI because HAYASHI fails to teach the recited "second secondary IC die" that is linked by "secondary conductive paths" to "the second surface of the base IC die". See, for example, the applicant's FIG. 11 including a "first secondary die" 214 and a "second secondary die" 220, linked to opposite, first and second sides of a base IC die 212.

The Examiner errs in pointing to item 3 as the citing device 3 as the recited "second secondary die" since it is not linked to a second surface of a base IC die and since item 3 is a packaged IC, not an IC die.

Claim 30

Claim 30 depends on claim 29 and is distinguishable over HAYASHI for similar reasons. Claim 30 is further distinguishable over HAYASHI because HAYASHI fails to teach the recited "conductive vias extending between the first and second surfaces of the base IC die". See, for example, vias 224 of the applicant's FIG. 11 extending between first and second surfaces of base IC die 212.

The Examiner errs in pointing to HAYASHI FIGS. 1-16 as showing conductive vias providing signal paths between first and second surfaces of an IC die. No IC die appear in any of FIGS. 1-16, and no vias extending between first and second surfaces of an IC die appear in any of HAYASHI's FIGS. 1-16. None of HAYASHI's FIGS. 1-16 show any vias, and nothing in HAYASHI's specification mentions anything about use of vias for any purpose.

4,5 Claims 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAYASHI in view of U.S. patent 6,330,164 (KHANDROS). The Examiner is respectfully requested to withdraw the rejection of claims 25-28 in view of the comments below distinguishing the applicant's claims over the combination of HAYASHI and KHANDROS.

Claims 25-28

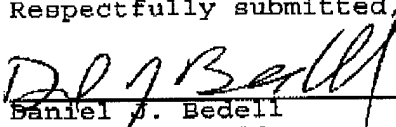
Claims 25-28 depend on parent claim 21 and the Examiner relies on HAYASHI as teaching the limitations of parent claim 21. Since HAYASHI fails to teach or suggest limitations of parent claim 21 for the reasons discussed above, and since KHANDROS fails to disclose limitations of parent claim 21, claim 25 is patentable over the combination of HAYASHI and KHANDROS.

Claim 31

Claim 31 depends on claim 30, and the Examiner relies on HAYASHI as teaching the limitations of parent claim 30. Since HAYASHI fails to teach or suggest limitations of parent claim 30 for the reasons discussed above, and since KHANDROS fails to disclose limitations of parent claim 30, claim 31 is patentable over the combination of HAYASHI and KHANDROS.

It is believed that in view of the foregoing amendments and remarks, the application is in condition for allowance. Notice of Allowance is therefore respectfully requested.

Respectfully submitted,


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August 26, 2002
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